

CLEAN COPY OF AMENDED CLAIMS

23. A method for the transmission of data in a synchronous digital hierarchy (SDH) network, comprising the steps of: transmitting to a node of the network a form of data signal from outside the network, converting the signal into a virtually concatenated information structure having path overhead information, and transporting the signal through the network in the virtually concatenated information structure, the converting step including the step of processing the path overhead information of the signal, whereby the path overhead information is maintained.

24. The method of claim 23, comprising the step of converting the signal so transported into a signal of the form of the data signal transmitted to the node of the network , the converting step including the step of processing the path overhead information of the signal so transported, whereby the path overhead information is maintained.

27. (Amended) The method of claim 26, wherein the path overhead information comprises bytes H4, J1 and B3, wherein the VC-4 and VC-3 comprise a plurality of frames, and the step of processing the path overhead information includes the steps of using byte H4 for indicating frame sequence within the VC-4 or VC-3, using byte J1 to indicate an order of VC-4s or VC-3s in the virtually concatenated information structure, and correcting, as necessary, error indication information carried in byte B3.

34. The method of claim 33, wherein the path overhead information comprises bytes V5, J2, N2 and K4, and wherein the step of processing the path overhead

information includes the step of transferring contents of the path overhead bytes to unused parts of the signal.

45. A method for the transmission of data in a synchronous digital hierarchy (SDH) network, comprising the steps of: transmitting to a node of the network a contiguously concatenated data signal from outside the network, converting the signal into a virtually concatenated information structure having path overhead information, and transporting the signal through the network in the virtually concatenated information structure, the converting step comprising the step of processing the path overhead information of the signal including the step of using a part of the path overhead information to indicate a sequence of frames in the virtually concatenated information structure, whereby the path overhead information is maintained.

46. The method of claim 45, comprising the step of converting the signal so transported into a signal of the form of the data signal transmitted to the node of the network, the converting step comprises the step of processing the path overhead information of the signal so transported, and restoring the part of the path overhead information used to indicate the sequence of frames in the virtually concatenated information structure, whereby the path overhead information is maintained.

48. The method of claim 47, wherein the path overhead information comprises bytes H4, J1 and B3, wherein the VC-4 and VC-3 comprise a plurality of frames, and the step of processing the path overhead information includes the steps of using byte H4

for indicating frame sequence within the VC-4 or VC-3, using byte J1 to indicate an order of VC-4s or VC-3s in a virtually concatenated information structure, and correcting, as necessary, error indication information carried in byte B3.

55. The method of claim 54, wherein the path overhead information comprises bytes V5, J2, N2 and K4, and wherein the step of processing the path overhead information includes the step of transferring contents of the path overhead bytes to unused parts of the signal.

62. A synchronous digital hierarchy (SDH) network in which data is carried, the network comprising: tributary interfaces arranged and configured to process a signal received in a contiguously concatenated form for conversion into a virtually concatenated information structure having path overhead information for transfer across the network, the tributary interfaces comprising means for processing the path overhead information of the signal including means for using a part of the path overhead information to indicate a sequence of frames in the virtually concatenated information structure, whereby the path overhead information is maintained.